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Earnings Management – Does Corporate Sustainability Performance Matter?

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Preliminary

Abstract

This study investigates the relationship between corporate sustainability performance and earnings management practices in a European setting. We measure earnings management based on discretionary accruals (cash flow approach) and real activity management. Corporate sustainability performance is a multi-dimensional construct that is measured based on data provided by the CSRHub database. Employing a European sample of 1,426 firm-year observations, our results reveal a negative relationship between corporate sustainability performance and earnings management activities. This finding supports the notion that a broad and integrated approach of sustainability performance constrains the use of earnings management practices. The results are consistent with recent research on U.S. non-financial companies (Kim et al. 2012), indicating the application of similar principles in U.S. and European settings. Additional analyses reveal that this relationship is particularly applicable to the environmental and community dimensions of sustainability, whereas we find only limited empirical evidence on this relationship for the employee dimension. Taken together, our study provides further evidence regarding the relevance of corporate sustainability in the financial context.

Keywords: corporate sustainability performance, earnings management, discretionary accruals, real activity management, legitimacy theory, stakeholder theory

JEL: M14, M41

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Introduction

Accounting standards help define the communication process between internal stakeholders (i.e., managers) and external stakeholders with regard to a company's financial and economic performance. External stakeholders can use financial statements to assess the present financial situation of a company and to distinguish between good- and poor-performing companies. However, because accounting standards rely on management judgment to some extent, managers may exploit the flexibility of accounting standards to "either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers" (Healy and Wahlen 1999). The motivations for opportunistic earnings management arise from the conflicting incentives inherent in the relationship between firm insiders and firm outsiders (Leuz et al. 2003); thus, insiders engage in earnings management activities for their own benefit and to the detriment of (or at least neglecting the interests of) other stakeholders. In addition to regulatory actions that aim to constrain earnings management activities, some researchers have recently introduced a new perspective into this discussion: firms' corporate sustainability performance.

These researchers describe sustainability performance as a multi-dimensional construct that includes economic, environmental and social dimensions. High-level sustainability performance reflects the pursuit of corporate social responsibility principles (Wood 1991) that constrain earnings management activities. In this context, Gelb and Strawser (2011) state: "[I]ncreased [financial] disclosure is a form of socially responsible behavior". This *integrative* understanding of sustainability performance is reflected in a *negative* relationship between sustainability performance and earnings management activities. Such a negative relationship is also consistent with the reasoning of socio-political theories, in particular legitimacy and stakeholder theory. However, other researchers argue that there is a *positive* relationship between sustainability performance and earnings management. These scholars claim that superior sustainability performance comes along with higher stakeholder orientation and the prevalence of multiple objectives, which grants managers additional leeway for the pursuit of earnings management activities (Chih et al. 2008; Gargouri et al. 2010).

Until now, only a limited number of empirical studies have investigated the relationship between sustainability performance and earnings management behavior (Chih et al. 2008; Gargouri et al. 2010; Labelle et al. 2010; Hong and Andersen 2011; Kim et al. 2012). The results from these studies are mixed – often due to methodological differences, including differences attributable to sample composition and the measurement of the main variables, in particular. For instance, most studies concentrate on accruals management, whereas few studies (Hong and Andersen 2011; Kim et al. 2012) integrate real activity management as an earnings management proxy. Moreover, most of these studies focus on companies in a U.S. setting. Previous research, however, has shown that earnings management practices vary across countries due to country-specific differences in investor protection (Leuz et al. 2003). Therefore, the results from these studies may not be generalizable to European companies given that the institutional settings of European countries differ from those in the U.S. Moreover, there are substantial differences between the sustainability performance of European and U.S. companies (Matten and Moon 2008), and it thus remains unclear what type of theoretical reasoning might apply in a European context.

Against this background, this study investigates the relationship between sustainability performance and earnings management in a European setting. We measure sustainability performance as a multi-dimensional construct based on data provided by the database CSR Hub. Following Kim et al. (2012), our proxies for earnings management include both accrual-based and real activity management approaches. Our sample comprises a total of 1,426 firm-year observations and two reporting years. The results from our investigation reveal a negative relationship between sustainability performance and earnings management practices. Thus, sustainability performance seems to *constrain* and not boost earnings management activities, which is consistent with an integrative understanding of

sustainability performance and the reasoning of socio-political theories. More generally, our study provides further evidence regarding the relevance of these theories in the financial context. As proposed in the model developed by Wood (1991), the principles of corporate social responsibility appear to penetrate all levels of an organization, resulting in reduced earnings management by management. Apart from the main focus of our research, our study's findings are also relevant for the large body of research addressing the relationship between sustainability performance and financial performance (Orlitzky et al. 2003; Schreck 2011; Dixon-Fowler et al. 2012; Gramlich and Finster 2013). If financial performance is measured based on accounting information, the negative relationship between sustainability performance and earnings management weakens a potentially positive relationship between sustainability performance and financial performance and reinforces a potentially negative relationship. With regard to the earnings management literature, our paper suggests expanding the agency-based perspective of most previous research. Outsiders might use the sustainability performance of a company as an indicator in assessing the transparency of financial reporting behavior.

The remainder of this paper is structured as follows. The next section reviews the related literature and develops our hypotheses. The third section explains the study's research design, offers an overview of the dependent and independent variables and provides a description of the data sample. Descriptive results and the findings from both regression analyses and robustness tests are reported in the fourth section. The last section concludes.

Literature Review and Hypotheses Development

Following Healy and Wahlen (1999), "earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers." Earnings management takes place within the boundaries of accounting standards and is closely related to the more general concepts of financial reporting quality and transparency. Although it might be thought that earnings management could assume a form in which it served to signal private information to outsiders, this paper refers to earnings management as indicating management's opportunistic or economically inefficient manipulations, such as deflating bad debt or exaggerating sales. Such an approach is supported by a substantial number of empirical studies indicating that earnings management frequently occurs near certain events, such as share capital increases (Beneish and Vargus 2002; Cohen and Zarowin 2010), initial public offerings (Ball and Shivakumar 2008), and mergers/acquisitions (Erickson and Wang 1999).

We follow previous research on earnings management (Cohen et al. 2008; Cohen and Zarowin 2010; Zang 2012) and integrate two measurement approaches of earnings management into our study: discretionary accruals and real activity management. The first approach relates more to the *reporting and accounting* of earnings, whereas the latter refers to *actions* that depart from standard business practices (Roychowdhury 2006). The prior literature offers empirical evidence regarding the negative long-term economic consequences of firms that engage in earnings management (Gunny 2010). Apart from these negative effects, earnings management hampers financial reporting transparency and is generally considered unethical (Fischer and Rosenzweig 1995; Kaplan 2001). Therefore, discovering those measures that are able to constrain earnings management behavior is of interest to practitioners, academics and regulators alike. Traditionally, there has been a focus on regulatory actions that aim, in particular, at enhancements in corporate governance mechanisms. Recently, Gros and Wallek (2015) provide some evidence that firms that voluntarily adhere to stricter regulation in terms of transparency show less earnings management behavior. Besides private regulation, some researchers have integrated another perspective into this discussion: firms' sustainability performance. These researchers present mixed findings on the relationship between sustainability performance and earnings management, with some studies indicating a negative relationship (Labelle et al. 2010; Hong and Andersen 2011; Kim et al. 2012), some studies indicating a positive relationship (Prior et al. 2008;

Gargouri et al. 2010), and one study indicating differential findings depending on different measures of earnings management activities (Chih et al. 2008).

From a theoretical perspective, there are different approaches to describing corporate social responsibility and corporate sustainability (Carroll 1979; Wood 1991; Elkington 1997). In this study, we consider the terms corporate social responsibility, corporate social performance and corporate sustainability (performance) as close equivalents. Elkington (1997) describes corporate sustainability as a multi-dimensional construct that consists of not only an economic but also other dimensions, including the social and environmental dimensions of a company. Such a broad understanding is also depicted in Wood's (1991) model of corporate social performance that is not restricted to social aspects, but also covers ecological and economics aspects. Within this model, corporate social performance is defined as "a business organization's configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationships" (Wood 1991). These principles of Wood's (1991) framework can serve as a starting point for theoretically deducting potential relationships between sustainability performance and earnings management practices. The integrative understanding of sustainability performance is closely related to socio-political theories, in particular legitimacy and stakeholder theory. From an institutional and organizational perspective, companies engage in corporate sustainability to achieve or maintain legitimacy among stakeholders, which is essential for a company's long-term survival (Suchman 1995; O'Donovan 2002). These stakeholders are typically heterogeneous (Freeman 1984) and corporate social responsibility is thus not limited to one dimension. From a managerial perspective, Wood's (1991) principle of managerial discretion suggests that managers "exercise such discretion as is available to them, toward socially responsible outcomes." These same managers are also unlikely to engage in earnings management behavior. Thus, understanding sustainability performance as a multi-dimensional and multi-layer construct includes the financial reporting behavior of a company. Similarly, Gelb and Strawser (2011) argue that "increased [financial] disclosure is a form of socially responsible behavior". Following this reasoning, we expect to find a negative relationship between sustainability performance and earnings management as formally posited in hypothesis H1.
H1: There is a negative relationship between sustainability performance *and earnings management.*

Empirical evidence for the negative relationship between sustainability performance and earnings management is presented by Labelle et al. (2010), Hong and Andersen (2011), and Kim et al. (2012). Labelle et al. (2010) concentrate on diversity management as the main sustainability performance related variable. Using a sample of 156 firm-year observations they reveal a negative and significant relationship between a diversity management score provided by Jantzi Research and earnings management. Results from their study indicate that particularly the employee-related dimension of sustainability might affect earnings management. However, the sample composition of the companies in the Canadian Social Investment Database may limit the generalizability of their findings due to positive self-selection effects. These problems are overcome by Hong and Andersen (2011) and Kim et al. (2012), who reveal a negative relationship between sustainability performance and earnings management in U.S. samples. Both studies rely on the Kinder, Lydenberg, Domini (KLD) ratings of strengths and concerns for the measurement of CSR. Whereas Hong and Andersen (2011) only integrate accruals quality into a multivariate analysis, Kim et al. (2012) integrate various measurement approaches for earnings management, including discretionary accruals, proxies for real activities manipulation, and releases from Accounting and Auditing Enforcement (AAER).

In contrast to a negative relationship between sustainability performance and earnings management, the literature typically refers to managerial opportunism as an explanation for a positive relationship. These scholars argue that managerial opportunism is more likely to occur if a company pursues multiple objectives (Chih et al. 2008; Gargouri et al. 2010). In this case, multiple stakeholders are involved, and the manager obtains additional leeway that is used to engage in earnings management activities for the manager's own benefit at the expense of the firm. Another explanation for a positive relationship between sustainability performance and earnings management is presented by Gargouri et

al. (2010), who conjecture that the additional costs associated with sustainability performance create incentives for managers to engage in earnings management activities. Finally, some researchers argue that sustainability performance per se arises from managerial opportunism and is thus positively associated with earnings management (McWilliams and Siegel 2000; Prior et al. 2008; Kim et al. 2012). These different arguments are summed up and formally stated in H2:
H2: There is a positive relationship between sustainability performance *and earnings management.*

Empirical evidence for such a positive relationship is presented by Prior et al. (2008), Chih et al. (2008) and Gargouri et al. (2010). However, substantial limitations in the research setting employed by Prior et al. (2008) may affect the generalizability of their findings with respect to our own research interest. Contrary to our understanding of the relationship between sustainability performance and earnings management, Prior et al. (2008) argue that managers with motivations to manage earnings engage in CSR to gain support from various groups of stakeholders and thus regress sustainability performance on earnings management. Our argumentation is more consistent with the research setting of Gargouri et al. (2010) and Chih et al. (2008). These authors regress earnings management on sustainability performance controlling for a number of variables that are typically associated with earnings management. While the focus of Gargouri et al. (2010) is trained solely on discretionary accruals, a more refined picture is presented by Chih et al. (2008), who show a negative relationship between sustainability performance and earnings losses and decreases avoidance and a positive relationship between sustainability performance and earnings aggressiveness. However, these authors measure sustainability performance as inclusion in the FRSE4Good Global Index, whereas recent research suggests that this measurement relates more to a company's reputation for sustainability rather than to the actual sustainability performance of a company (Cho et al. 2012).

Overall, the inconsistent findings of previous empirical studies might be due to methodological inconsistencies with regard to variable measurements and sample selection. Although these methodological caveats are mainly resolved in Kim et al. (2012), the empirical findings in that study are restricted to U.S. companies and might differ in a European setting due to the different environments in which European companies and capital markets operate.

Research Design

Measurement of Earnings Management

1.1.1 Discretionary Accruals

Earnings management research has traditionally concentrated on investigating accruals that arise as a discrepancy between the timing of cash flow and the accounting recognition of the transaction. These total accruals are split into discretionary and non-discretionary components (Healy 1985; L. DeAngelo 1986; Jones 1991). The amount of discretionary accruals is an indicator of earnings management. The calculation of total accruals can be based on either the cash flow or on the balance sheet approach. In this study, we use accruals from cash flow because they are less prone to influences from outside shocks. These accruals are calculated as earnings before extraordinary items less cash flow from operations.

We measure discretionary accruals using the modified Jones model (Dechow et al. 1995). A comparison of different measurement models for discretionary accruals by Kothari et al. (2005) indicates that the modified Jones model, including ROA_{t-1} as an additional regressor, is powerful in controlling for performance. All variables are scaled by lagged total assets to avoid heteroskedasticity.[3] We use robust regressions for our calculations to avoid overemphasizing outliers. Discretionary accruals are estimated using the following regression by industry and year for each sample firm i:

[3] Kothari et al. (2005) find that including a constant term avoids misspecification.

$$(1) \qquad \frac{TA_{i,t}}{A_{i,t-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{i,t-1}} + \alpha_2 \frac{(\Delta SALES_{i,t} - \Delta AR_{i,t})}{A_{i,t-1}} + \alpha_3 \frac{PPE_{i,t}}{A_{i,t-1}} + \alpha_4 \frac{IB_{i,t-1}}{A_{i,t-1}} + \varepsilon_{i,t}$$

where

TA_t	total accruals at year t
A_t	total assets at year t
$\Delta SALES_t$	change in sales in year t from year t-1
ΔAR_t	change in accounts receivable in year t from year t-1
PPE_t	gross property, plant, and equipment at year t
IB_t	income before extraordinary items at year t

The resulting coefficients are used to calculate expected total accruals for each sample firm. The difference between actual total accruals and expected total accruals represents discretionary accruals. These accruals are positive (POS_DA) if actual accruals are higher than expected accruals; otherwise, they are zero or negative (NEG_DA). Because both negative and positive amounts indicate discretionary behavior, the absolute value (ABS_DA) is also considered.

1.1.2 Real Activity Management

Companies also undertake earnings management through real activity management (RAM), which consists of purposeful actions meant to influence earnings and other accounts. These activities include the timing or structuring of an operation, investment, or financing transaction. Roychowdhury (2006) employs several real activity measures, based on Dechow et al. (1998). Following Cohen et al. (2008), three of these measures are employed in this study to indicate abnormal production costs (RM_PROD), abnormal discretionary expenses (RM_DISX), and abnormal cash flow from operations (RM_CFO). First, production costs (Prod) consist of the costs of goods sold (COGS) plus changes in inventory. Increasing production over the regular amount can inflate earnings and lower the cost of goods sold (COGS) to report higher operating margins. Furthermore, overproduction can result in high abnormal production costs relative to sales (and low CFO). The model to estimate normal production costs is calculated per industry and year as follows:

$$(2) \qquad \frac{\mathrm{Pr}od_{i,t}}{A_{i,t-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{i,t-1}} + \alpha_2 \frac{SALES_{i,t}}{A_{i,t-1}} + \alpha_3 \frac{\Delta SALES_{i,t}}{A_{i,t-1}} + \alpha_4 \frac{\Delta SALES_{i,t-1}}{A_{i,t-1}} + \varepsilon_{i,t}$$

As above, the resulting coefficients are used to calculate expected production costs for each sample firm. The difference between actual and expected amounts is the abnormal segment (RM_PROD). The second accounting item is discretionary expense (DISX), which consists of research and development expenses, selling, general, and administrative expenses, and advertising expenses. Typically, they are expensed as occurred. However, companies can deflate this account to increase their income. To facilitate the interpretation, the results are multiplied by (-1). Higher abnormal amounts (RM_DISX) indicate a stronger influence. We estimate the normal level of discretionary expenses as:

$$(3) \qquad \frac{DISX_{i,t}}{A_{i,t-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{i,t-1}} + \alpha_2 \frac{SALES_{i,t-1}}{A_{i,t-1}} + \varepsilon_{i,t}$$

The third item is operating cash flow (CFO), which can be influenced by several means. Management can temporarily reduce prices or allow for lenient credit terms to increase income. Due to lower margins, the cash inflow per sold item is lower than normal. Furthermore, overproduction can reduce operating cash flow when sales are constant. Conversely, cutting discretionary expenses could increase cash flow from operations. Abnormal cash flow from operations (RM_CFO) is the third proxy for real activity management. The abnormal amount is estimated by the residuals in equation (4). We expect to predominantly find actual cash flow that is lower than expected cash flow due to strong overproduction activities. To harmonize the interpretations of our main results, we multiply the residuals by (-1). Hence, higher values of RM_CFO indicate more intense earnings management activities. We run the following regression to estimate normal CFO:

$$(4) \qquad \frac{CFO_{i,t}}{A_{i,t-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{i,t-1}} + \alpha_2 \frac{SALES_{i,t}}{A_{i,t-1}} + \alpha_3 \frac{\Delta SALES_{i,t}}{A_{i,t-1}} + \varepsilon_{i,t}$$

Both abnormally high and abnormally low discretionary amounts indicate real activities management. The effects of the RM_PROD, RM_CFO, and RM_DISX measures can occur individually or mutually. Therefore, the combined proxy (COM_RM) of aggregated abnormal production and abnormal discretionary expenses is also examined. Due to the ambiguous effects inherent in operating cash flow (Roychowdhury 2006; Zang 2012), we follow Cohen and Zarowin (2010) and do not include this proxy in the combined measure, which distinguishes our analysis from Kim et al. (2012), who include all three items in the combined measure. A substantial amount of the combined proxy indicates the use of substantial real activity management.

Measurement of Corporate Sustainability Performance

Consistent with the theoretical understanding of sustainability performance as a multi-dimensional construct, sustainability performance is measured as the composite performance including the dimensions of employees, environment, and community. We rely on data provided by the CSRHub database (for the following description, CSRHub (2013)). The CSRHub database offers access to a broad variety of information on sustainability performance and ratings for over 6,700 companies in 82 countries. Ratings are based on 12 indicators in four categories: employees, the environment, community, and corporate governance. CSRHub extracts data from more than 175 data sources (e.g., ASSET4/Thomson Reuters, Carbon Disclosure Project, EIRIS, GovernanceMetrics International/ Corporate Library, IW Financial, MSCI, Trucost, and Vigeo, among others), transforms them into a [0, 100] scale and maps them to the four categories. On overage, 500 data elements are included in each rating. Companies with fewer than 70 available data elements are excluded from the rating. Compared with traditional analyst-based rating methods, the measurement is based on a multi-stakeholder approach that includes evaluations and ratings from a variety of stakeholders, such as SRI sources, NGOs, government groups, customer surveys and others. Such a broad measurement approach enhances the validity and reliability of the measurement. However, CSRHub does not disclose the transformation and mapping procedure in detail for proprietary reasons. As this caveat also applies to other sustainability performance ratings and hence to some of the original values, it is mitigated by the huge number of data elements the measurement comprises. Currently, more than 8,400 different data elements are included. For some data elements, original data values are displayed (depending on license agreements).

Moreover, the quantitative measurement of sustainability performance within the [0, 100] range accounts for variance within each subcategory and hence resolves the methodological difficulties associated with previous research using a binary measurement approach. Our sustainability performance variable CSP is the average of the scores for the three categories of employees, environment, and community and ranges between [0, 100]. As previous research has demonstrated the significant impact of corporate governance on financial disclosure (Eng and Mak 2003; Cheng and

Courtenay 2006), we follow Kim et al. (2012) and Labelle et al. (2010) and include corporate governance as a separate control variable (GOV) into our models. For univariate analyses and robustness checks, we follow previous research (Hong and Andersen 2011; Kim et al. 2012) and transform CSP into a binary variable, CSP_binary, that equals 1 if CSP is equal to or greater than the median of CSP in our sample and 0 otherwise. Companies with CSP_binary variables equal to 1 are CSP companies, and companies with CSP_binary variables equal to 0 are non-CSP companies.

Sample and Methodological Approach

Our sample firms are drawn from the CSRHub in 2010 and 2011, with sufficient data available in COMPUSTAT to calculate the required regressions. We use annual data, and we eliminate banks and financial institutions (GICS 40).[4] The final sample includes 713 companies in each of 2010 and 2011, resulting in a total of 1,426 firm-year observations. Panel A of Table 1 shows the distribution of companies by GICS code. The largest number of firms in our sample are Industrial firms, and a large number of the remaining firms are in the Consumer Discretionary and Materials sector. Panel B of Table 1 shows the distribution of company years by country. The largest share of companies, approximately 34 percent, are based in the United Kingdom. France and Germany are also strongly represented in the sample.

Insert table 1 about here

The relation between earnings management and sustainability performance in the sample firms can be measured with two regression models for sample firm i and period t (Kim et al. 2012):

$$(5)\quad DA_{i,t} = \alpha_0 + \alpha_1 CSP_{i,t} + \alpha_2 COM\_RM_{i,t} + \alpha_3 SIZE_{i,t-1} + \alpha_4 MB_{i,t-1} + \alpha_5 ROA_{i,t-1} + \alpha_6 AUDIT_{i,t} + \alpha_7 LEV_{i,t-1} + \alpha_8 RD\_INT_{i,t} + \alpha_9 GOV_{i,t} + \alpha_{10} AGE_{i,t} + \alpha_{11} ADMIRED_{i,t} + \alpha_{12} INVESTOR_i + \alpha_{13} CREDITOR_i + \sum_{i=14}^{i=21} INDUSTRY_i + \alpha_{22} YEAR + \varepsilon_{i,t}$$

$$(6)\quad RAM_{i,t} = \alpha_0 + \alpha_1 CSP_{i,t} + \alpha_2 ABS\_DA_{i,t} + \alpha_3 SIZE_{i,t-1} + \alpha_4 MB_{i,t-1} + \alpha_5 ROA_{i,t-1} + \alpha_6 AUDIT_{i,t} + \alpha_7 LEV_{i,t-1} + \alpha_8 RD\_INT_{i,t} + \alpha_9 GOV_{i,t} + \alpha_{10} AGE_{i,t} + \alpha_{11} ADMIRED_{i,t} + \alpha_{12} INVESTOR_i + \alpha_{13} CREDITOR_i + \sum_{i=14}^{i=21} INDUSTRY_i + \alpha_{22} YEAR + \varepsilon_{i,t}$$

where
DA = ABS_DA or POS_DA or NEG_DA
RAM = RM_PROD or RM_DISX or RM_CFO or COM_RM;
CSP = average score of sustainability performance, calculated as the mean of the scores in the three main categories of community, employees, and the environment;
COM_RM = combined measure of abnormal production costs and abnormal discretionary expenses;
SIZE = natural logarithm of the market value of equity;
MB = market-to-book ratio of equity;
ROA = return on total assets;

[4] Excluding banks and financial institutions is a common procedure. See, e.g., Leuz et al. (2003).

AUDIT = indicator variable that takes a value of 1 if the firm is audited by a Big 4 auditor, and 0 otherwise;
LEV = long-term debt by total assets;
RD_INT = R&D intensity, calculated as R&D expense divided by net sales;
GOV = rating of the main governance category as provided by the CSRHub database;
AGE = natural logarithm of years since IPO;
ADMIRED = an indicator variable that takes a value of 1 if the firm is listed in *Fortune's World's Most Admired Companies*, and 0 otherwise;
INVESTOR = investor protection index for the country of each firm that ranges from 0 to 10, with higher scores indicating higher investor protection (taken from the World Bank);
CREDITOR = creditor rights index for the country of each firm that ranges from 0 to 10 with higher scores indicating higher creditor rights (taken from the World Bank);
INDUSTRY = industry group dummy variables as reported in Table 1, with Industrials as the reference category;
YEAR = year dummy with 2010 as the reference category.

Equation (5) estimates the relation of accruals management to sustainability performance. The dependent variable of discretionary accruals (DA) is the proxy for accruals management. Equation (6) estimates the relation of real activity management to sustainability performance. The dependent variables are either abnormal cash flow from operations (RM_CFO), abnormal production costs (RM_PROD), abnormal discretionary expenses (RM_DISX), or the combined measure of abnormal real activity (COM_RM).

Companies use accruals and real activity management sometimes as substitutes and sometimes as complements (Cohen et al. 2008; Zang 2012). Hence, they can occur at the same time or separately. Following Cohen et al. (2008), we control for the substitution effect of the two techniques by including the combined measure of RAM (COM_RM) in equation (5). Correspondingly, equation (6) includes the discretionary accruals measure (ABS_DA) as a control variable.

Additional control variables are included to avoid correlated omitted variables resulting from financial reporting behavior and sustainability performance. Prior et al. (2008) find a significant relation between size and sustainability performance, whereas Prawitt et al. (2009) demonstrate a correlation between profitability and earnings management. Therefore, the variables for size (SIZE) and profitability (ROA) are added.[5] Roychowdhury (2006) includes the market-to-book ratio (MB) to control for the effects of firm-specific growth opportunities. Prior studies find that a higher audit quality results in lower earnings management (Francis et al. 1999). Because the Big 4 audit firms are expected to provide better audits, we add indicator variables for their presence in these companies (AUDIT). Additional control variables are leverage (LEV) and R&D-intensity.[6] Previous research has shown that leverage is significantly associated with accounting choices both in terms of income-increasing accruals due to contractual accounting-based constraints (Press and Weintrop 1990) and income-decreasing accruals due to contractual renegotiations (H. DeAngelo et al. 1994). According to McWilliams and Siegel (2000), R&D expense (RD_INT) is an important variable for effects on sustainability performance. As discussed above, we include the corporate governance dimension of sustainability performance as a separate control variable, thus accounting for previous research on the effects of corporate governance on financial disclosure quality (Eng and Mak 2003; Cheng and Courtenay 2006). A control for company age (AGE) is required because financial reporting as well as sustainability performance can change based on a company's development stage. Such an effect has previously been shown by Anthony and Ramesh (1992). Firm reputation is included because we

[5]Kim et al. (2012) observe no different effect between the control variables industry adjusted ROA and overall ROA.
[6] A control variable for equity offering incentives is dropped due to low data availability. However, except for the United Kingdom, almost no represented country shows a similar importance for the equity market as is shown in the U.S. sample employed by Kim et al. (2012). Therefore, the variable is less relevant to our study.

expect it to have a positive effect on earnings management activities under legitimacy theory. However, reputation is found to decrease the motivation for earnings management (Luchs et al. 2009). The corresponding indicator variable (ADMIRED) is based on the list of *Fortune's World's Most Admired Companies*. Finally, we include INVESTOR and CREDITOR to control for the extent of investor and creditor protection across countries. Leuz et al. (2003) reveal a strong link between the extent of investor protection in each country and earnings management activities. Strong protection of outsiders' rights reduces insiders' incentives to manage earnings. We insert INVESTOR as a proxy for the degree of investor protection in the country of each firm and CREDITOR as a proxy for the degree of creditor protection in the respective country. Our variables are drawn from the World Bank database,[7] and we follow Gunny (2010) and winsorize all continuous variables at the top and bottom 1% to limit the influence of outliers.

Results

Descriptive Results

Table 2 presents the descriptive results for the full sample and by low-performers and high-performers in terms of sustainability, respectively.

Insert Table 2 about here

Mean and median values of CSP equal approximately 53 (on a scale between 0 and 100) with a standard deviation of 8.4. The descriptive statistics show that our sample firms engage in earnings management activities through discretionary accruals. However, the mean values of the proxies are small and substantially lower than previous studies (Prior et al. 2008; Kim et al. 2012) indicating that the European sample firms engage in less earnings management. Similarly, although we find some evidence of earnings management activities through real activity management, the mean values for that measure are also low. The descriptive statistics for the control variables show that almost 94% of the sample firms are audited by Big 4 accounting firms. Our sample has an average market capitalization of 7.6 bn EUR (original value) and an average annual ROA of 4.8%.

A comparison between low sustainability performers ("CSP low-performers" are firms with a CSP value equal to or below the median) and high sustainability performers ("CSP high-performers" are firms with a CSP value above the median) yields significantly lower mean values of accrual-based proxies for earnings management practices (ABS_DA, POS_DA, NEG_DA) for high sustainability performers than for low sustainability performers ($p < .01$). Similar results are obtained for the real activity management proxy RM_DISX, but not for RM_CFO, RM_PROD and COM_RM. In addition, we find significant differences between low sustainability performers and high sustainability performers with regard to most of our control variables, indicating that high sustainability performers are larger, older, less profitable, and more frequently audited by Big 4 accounting firms. Furthermore, high sustainability performers are characterized by lower growth opportunities and higher leverage and more frequently belong to *Fortune's World's Most Admired Companies* than low sustainability performers.

Table 3 presents Pearson correlation coefficients revealing significant negative correlations between CSP and ABS_DA and RM_DISX and significant positive correlations between CSP and POS_DA as well as NEG_DA. Overall, these correlations tend to support the notion that sustainability performance exerts an overall beneficial influence on earnings management practices (as posited in hypothesis H1). Moreover, there are significant positive correlations between CSP and SIZE, AUDIT, LEV, GOV, AGE, and ADMIRED, and there are significant negative correlations between CSP and MB, ROA, INVESTOR and CREDITOR.

[7] Access to the database is provided through http://databank.worldbank.org.

Insert Table 3 about here

Results from Regression Analysis

The results from a multivariate regression analysis with robust standard errors are displayed in Table 4. Additional tests do not indicate problems of multicollinearity in our data.

Insert Table 4 about here

Overall, we find support for hypothesis H1 that posits a negative relationship between sustainability performance and earnings management activities. In particular, there is a negative and significant ($p < 0.1$) relation between CSP and ABS_DA and between CSP and POS_DA. Hence, both absolute and income-increasing earnings management activities decrease as high sustainability performers increases. Our results do not show any significant relationship with regard to income-decreasing earnings management activities (NEG_DA). Moreover, there is a negative and significant relationship between CSP and our proxies for real activity management with regard to production costs (RM_PROD, $p < 0.1$), discretionary expenses (RM_DISX, $p < 0.001$), and the combined measurement (COM_RM, $p < 0.01$). The results from the regression analysis do not present a significant relationship only for the variable measuring real activity management through cash flow (RM_CFO). In sum, we find evidence for the notion that the principle of public responsibility refers to a broad and integrated understanding of sustainability performance and consequently affects a company's financial reporting behavior. Moreover, neither of our models finds support for hypothesis H2, which posits a positive relationship between sustainability performance and earnings management. Taken together, these findings support the notion of a beneficial penetration of sustainability performance into all aspects of a company (H1), whereas there is no evidence that high-level sustainability performance grants managers additional leeway that they use to engage in earnings management.

The results from the regression analyses also offer insights into the relationship between other variables and earnings management. First, there is only limited evidence for the substitution hypothesis of earnings management activities that posits that firms change from predominantly using accruals-based earnings management to employing real activity management (Cohen et al. 2008; Zang 2012). We find support for this effect only with regard to RM_CFO. Next, our results show that firm size is negatively associated with earnings management indicating that larger firms are less likely to engage in earnings management activities. Again, this finding is consistent with the reasoning behind legitimacy theory, as larger companies face greater public pressure that constrains them from engaging in earnings management. With respect to the market-to-book ratio, return on assets, leverage and R&D intensity, our findings report predominantly negative associations with earnings management, revealing that firms with more prospective growth opportunities, higher returns on assets, higher leverage and higher R&D intensity are less likely to engage in earnings management. However, the type of auditor is not significantly associated with earnings management. Counter-intuitively, we find evidence for a positive relationship between governance and some proxies for real activity management. This finding is contradictory to the literature that assumes a positive effect of corporate governance mechanisms on financial disclosure because corporate governance mechanisms enhance monitoring quality and consequently reduce benefits from withholding information (Forker 1992). A possible explanation for this finding might be a potential crowding-out effect (Bénabou and Tirole 2006) of the more explicit and formal structures of corporate governance on the more informal and implicit aspects of sustainability performance. With respect to AGE, our findings are mixed, revealing a positive relationship with NEG_DA, i.e., older companies engage in less earnings management activities, and a positive relationship with RM_CFO, i.e., older companies engage in more earnings management activities. Notably, the associations between ADMIRED and earnings management are predominantly positive, revealing that companies with better reputations engage in more earnings management. This finding resembles that of Cho et al. (2012), who show that environmental reputation is negatively associated with environmental performance. Counter-intuitively, there is an

overall positive relationship between INVESTOR and earnings management proxies, indicating that earnings management activities are more common in countries with higher investor protection. However, there is an overall negative relationship between CREDITOR and earnings management suggesting that earnings management activities are less common in countries with stronger creditor rights.

We perform supplemental analyses to check the robustness of our main results. First, we rerun the regressions, including CSP_binary instead of CSP as our main variable of interest. In so doing, we can differentiate between sustainability and non-sustainability companies. Although we prefer a continuous over a dichotomous variable, we include this broader measure as a robustness check to account for the problem that very small differences may not result in corresponding earnings management activities. Overall, the results (unreported) from these analyses are consistent with our main findings, revealing a negative and significant relationship between sustainability performance and earnings management. However, in contrast to our main results, the relationship becomes insignificant with respect to POS_DA.

Second, we check whether our results are driven primarily by one particular dimension of sustainability, and we thus rerun the regression analyses for each dimension of sustainability separately. Thus, we replace our main variable of interest, CSP, with three variables that correspond to the sustainability assessments in the community (CSP_COM), employees (CSP_EMP) and the environment (CSP_ENV) dimensions. Our results (unreported) are almost identical to our main findings with respect to CSP_COM and CSP_ENV, indicating negative and significant relationships with various proxies for earnings management. However, with respect to the employee dimension, negative and significant associations are obtained only for RM_PROD, RM_DISX and COM_RM, while the results for the accruals-based proxies of earnings management are insignificant. This finding is surprising to the extent that we would expect to find the employee dimension of sustainability particularly relevant with respect to earnings management because this behavior is mainly driven by employee (managerial) action.

Conclusions

This study investigates the relationship between firms' sustainability performance and earnings management activities with respect to two opposing hypotheses. On the one hand, based on Wood's (1991) model and on socio-political theories, a negative relationship between sustainability performance and earnings management is posited (H1). Following this reasoning, sustainability performance is a multi-dimensional construct that affects all levels of an organization, including financial reporting behavior. Briefly stated, "increased [financial] disclosure is a form of socially responsible behavior" (Gelb and Strawser 2011). On the other hand, there might be a positive relationship between sustainability performance and earnings management (H2) due to managerial opportunism. The basic argument for such a relationship is that higher sustainability performance is accompanied by broader stakeholder orientation and the existence of multiple objectives, which results in additional leeway for managerial opportunism. Empirical evidence regarding this relationship is mixed and derives primarily from studies of U.S. firms.

We investigate this relationship in a sample of 713 European firms and two reporting years. Our research design includes a variety of accruals-based and real activity management proxies for earnings management. Sustainability performance is measured based on data provided by CSRHub that cover multiple dimensions of sustainability. Results from our regression analyses support hypothesis H1, revealing a predominantly negative and significant relationship between sustainability performance and earnings management practices. This finding supports the notion that a broad and integrated approach of sustainability performance – as described by Wood (1991) – constrains the use of earnings management practices. We find this relationship for both a discretionary accruals-based measurement approach to assessing earnings management and for several proxies for real activity management. The results are consistent with recent research on U.S. non-financial companies (Kim et

al. 2012), indicating the application of similar principles in U.S. and European settings. Additional analyses reveal that this relationship is particularly applicable to the environmental and community dimensions of sustainability, whereas we find only limited empirical evidence on this relationship for the employee dimension.

Taken together, our study adds new insights into the importance of integrative and socio-political theories in earnings management research. Whereas previous research has focused predominantly on regulatory actions, our study indicates that sustainability performance offers an effective approach to constrain earnings management activities. In addition, the results from our study also must be integrated into the ongoing discussion on the 'value relevance' of sustainability performance (Orlitzky et al. 2003; Schreck 2011; Dixon-Fowler et al. 2012; Gramlich and Finster 2013). Results from these studies might be biased if they rely on accounting numbers and do not account for the link between sustainability performance and earnings management. As with all empirical studies, our study is also subject to a number of limitations, which also present opportunities for future research.

First, our sample size is rather small and covers only two reporting periods. It would be a valuable contribution to enlarge the sample size and include additional reporting periods. In addition, further analyses might study the relationship between sustainability performance and earnings management around certain corporate events that are typically prone to earnings management activities, such as share capital increases and initial public offerings. Second, our measurement of sustainability performance relies on data provided by the CSRHub database. Although this measurement approach overcomes the reliance on a single aspect of sustainability performance by integrating data from different rating agencies, the measure nevertheless lacks transparency. Future research should therefore consider the use of alternative measurement approaches that are based on publicly available data to improve the external validity of sustainability performance measures and ensure the comparability of empirical results.

Table 1 Sample Distribution by Industry and Country

Panel A: Distribution by Industry					
GICS Sector	**GICS Sector Code**	**No. of Obs. 2010**	**No. of Obs. 2011**	**Total**	**% of Sample**
Energy	10	49	51	100	7.01%
Materials	15	81	81	162	11.36%
Industrials	20	201	198	399	27.98%
Consumer Discretionary	25	140	143	283	19.85%
Consumer Staples	30	61	60	121	8.49%
Health Care	35	52	50	102	7.15%
Information Technology	45	57	54	111	7.78%
Telecommunication Services	50	30	32	62	4.35%
Utilities	55	42	44	86	6.03%
Total		**713**	**713**	**1,426**	**100.00%**
Panel B: Distribution by Country					
Country	**ISO Country Code**	**No. of Obs. 2010**	**No. of Obs. 2011**	**Total**	**% of Sample**
Austria	AUT	14	15	29	2.03%
Belgium	BEL	18	17	35	2.45%
Czech Republic	CZE	2	2	4	0.28%
Denmark	DNK	19	19	38	2.66%
Finland	FIN	24	25	49	3.44%
France	FRA	77	76	153	10.73%
Germany	DEU	71	74	145	10.17%
Greece	GRC	14	13	27	1.89%
Hungary	HUN	3	3	6	0.42%
Ireland	IRL	13	13	26	1.82%
Italy	ITA	34	34	68	4.77%
Luxembourg	LUX	8	9	17	1.19%
Netherlands	NLD	30	31	61	4.28%
Norway	NOR	18	19	37	2.59%
Poland	POL	6	11	17	1.19%
Portugal	PRT	8	8	16	1.12%
Spain	ESP	32	30	62	4.35%
Sweden	SWE	34	33	67	4.70%
Switzerland	CHE	43	42	85	5.96%
United Kingdom	GBR	245	239	484	33.94%
Total		**713**	**713**	**1,426**	**100.00%**

This table presents the sample distribution by industry (Panel A) and by country (Panel B) for 2010, 2011 and the total sample.

Table 2 Descriptive statistics

	Full sample						CSP low-performer			CSP high-performer			
	n	Mean	Std. Dev.	25th Percentile	50th Percentile	75th Percentile	n	Mean	Median	n	Mean	Median	p-value
Dependent Variables													
ABS_DA	1,426	0.034	0.026	0.012	0.026	0.050	731	0.038	0.030	695	0.029	0.022	0.000
POS_DA	775	0.033	0.024	0.012	0.027	0.050	393	0.036	0.030	382	0.029	0.022	0.000
NEG_DA	651	-0.035	0.029	-0.051	-0.025	-0.011	338	-0.041	-0.031	313	-0.029	-0.022	0.000
RM_PROD	1,426	0.003	0.127	-0.082	0.018	0.100	731	0.005	0.022	695	0.002	0.014	0.617
RM_DISX	1,426	0.003	0.103	-0.067	0.014	0.081	731	0.008	0.022	695	-0.002	0.007	0.070
RM_CFO	1,426	0.003	0.049	-0.031	0.005	0.040	731	0.001	0.004	695	0.004	0.007	0.148
COM_RM	1,426	0.007	0.216	-0.133	0.032	0.167	731	0.013	0.043	695	0.000	0.026	0.240
Variable of Interest													
CSP	1,426	52.575	8.360	45.000	53.000	60.000							
Control Variables													
SIZE	1,426	7.821	1.186	6.853	7.778	8.753	731	7.314	7.242	695	8.355	8.497	0.000
MB	1,426	2.347	1.358	1.226	1.976	3.148	731	2.470	2.097	695	2.217	1.830	0.000
ROA	1,426	0.047	0.042	0.017	0.042	0.075	731	0.052	0.045	695	0.043	0.038	0.000
AUDIT	1,426	0.938	0.241	1.000	1.000	1.000	731	0.927	1.000	695	0.950	1.000	0.083
LEV	1,426	0.187	0.129	0.083	0.182	0.288	731	0.173	0.160	695	0.203	0.194	0.000
RD_INT	1,426	0.014	0.022	0.000	0.001	0.020	731	0.014	0.000	695	0.014	0.002	0.922
GOV	1,426	4.993	7.553	-1.000	5.000	12.000	731	-0.157	0.000	695	10.410	12.000	0.000
AGE	1,426	2.772	0.663	2.303	2.708	3.219	731	2.703	2.639	695	2.845	2.773	0.000
ADMIRED	1,426	0.088	0.283	0.000	0.000	0.000	731	0.008	0.000	695	0.171	0.000	0.000
INVESTOR	1,426	6.202	1.590	5.000	6.000	8.000	731	6.287	6.300	695	6.112	6.000	0.038
CREDITOR	1,426	7.817	2.015	7.000	8.000	10.000	731	7.947	8.000	695	7.681	7.000	0.013

This table presents descriptive statistics for the variables included in the regression analyses for the full sample. In addition, p-values (two-tailed) from a t-test of mean differences between the group of CSP low-performers and the group of CSP high-performers are reported. CSP low-performers include all companies with a CSP equal to or below the median. ABS-DA refers to the absolute value of both positive accruals (POS_DA) and negative accruals (NEG_DA). RM_PROD, RM_DISX, and RM_CFO refer to earnings management proxies from the management of production (RM_PROD), discretionary expenses (RM_DISX) and operating cash flow (RM_CFO). COM_RM is the aggregation of RM_PROD and RM_DISX. CSP is our main variable of interest and proxies for a firm's sustainability performance based on data provided by CSRHub. SIZE is the natural logarithm of the market value of equity, MB is the market-to-book ratio of equity, ROA is the return on total assets, AUDIT indicates whether the firm is audited by a Big 4 auditor (equals 1) or not (equals 0), LEV is long-term debt by total assets, RD_INT is the R&D intensity, GOV relates to the sophistication of a firm's corporate governance system, AGE is the natural logarithm of the number of years since IPO, ADMIRED proxies whether the firm is listed in *Fortune's World's Most Admired Companies* (equals 1) or not (equals 0), INVESTOR is an investor protection index from the World Bank for the respective country of each firm and CREDITOR is a creditor rights index from World Bank for the respective country of each firm.

Table 3 Pearson correlation coefficients

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. CSP	1.000													
2. ABS_DA	-0.187***	1.000												
3. POS_DA	0.150***	0.997***	1.000											
4. NEG_DA	0.234***	-0.997***		1.000										
5. RM_PROD	-0.018	0.002	0.025	0.019	1.000									
6. RM_DISX	-0.064**	0.013	-0.016	-0.041	0.734***	1.000								
7. RM_CFO	0.033	0.068**	0.329***	0.182***	0.454***	0.161***	1.000							
8. COM_RM	-0.039	0.005	0.005	-0.005	0.940***	0.912***	0.342***	1.000						
9. SIZE	0.522***	-0.241***	-0.161***	0.323***	-0.129***	-0.110***	-0.159***	-0.130***	1.000					
10. MB	-0.086***	0.069***	0.054	-0.078**	-0.318***	-0.183***	-0.456***	-0.270***	0.144***	1.000				
11. ROA	-0.093***	0.000**	0.039	0.041	-0.352***	-0.174***	-0.507***	-0.291***	0.166***	0.586***	1.000			
12. AUDIT	0.060**	0.019	0.027	-0.004	-0.043	-0.001	-0.046*	-0.028	0.095***	0.073***	0.033	1.000		
13. LEV	0.127***	-0.125***	-0.174***	0.071*	0.078***	0.124***	0.004	0.104***	0.103***	-0.116***	-0.257***	0.029	1.000	
14. RD_INT	0.014	0.051*	0.065*	-0.037	-0.109***	-0.251***	-0.047*	-0.179***	0.055**	0.172***	0.073***	0.033	-0.204***	1.000
15. GOV	0.786***	-0.105***	-0.076**	0.141***	-0.004	-0.005	0.002	-0.004	0.432***	-0.006	-0.027	0.131***	0.117***	-0.013
16. AGE	0.143***	-0.075***	0.017	0.184***	0.000	-0.006	0.099***	-0.004	0.075***	-0.053**	-0.019	0.073***	0.032	0.041
17. ADMIRED	0.349***	-0.102***	-0.069	0.145***	0.004	-0.009	0.025	-0.004	0.415***	-0.015	0.002	0.018	0.022	0.102***
18. INVESTOR	-0.083***	0.122***	0.077**	-0.162***	0.027	0.074***	-0.043	0.046*	-0.279***	0.031	0.058**	0.095***	-0.009	-0.170***
19. CREDITOR	-0.085***	0.076***	0.094***	-0.050	-0.070***	-0.041	-0.084***	-0.063*	-0.230***	0.129***	0.150***	0.090***	-0.180***	0.018

	15.	16.	17.	18.	19.
15. GOV	1.000				
16. AGE	0.140***	1.000			
17. ADMIRED	0.313***	0.118***	1.000		
18. INVESTOR	0.146***	0.067**	-0.108***	1.000	
19. CREDITOR	0.127***	0.056**	-0.044*	0.646***	1.000

The table reports Pearson correlation coefficients. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively.

Table 4 Regression results for discretionary accruals and real activity management

	ABS_DA Coefficient (t-stat)	POS_DA Coefficient (t-stat)	NEG_DA Coefficient (t-stat)	RM_PROD Coefficient (t-stat)	RM_DISX Coefficient (t-stat)	RM_CFO Coefficient (t-stat)	COM_RM Coefficient (t-stat)
CSP	-0.0003	-0.0003	0.0003	-0.0013	-0.0019	0.0001	-0.0031
	(-1.9369)*	(-1.7067)*	(1.2382)	(-1.9348)*	(-3.3303)***	(0.3932)	(-2.6945)***
COM_RM	-0.0001	0.0040	0.0066				
	(-0.0319)	(0.8716)	(1.1785)				
ABS_DA				-0.0259	0.0463	0.1102	-0.0075
				(-0.1893)	(0.4153)	(2.1639)**	(-0.0319)
SIZE	-0.0046	-0.0026	0.0073	-0.0065	-0.0034	-0.0041	-0.0109
	(-6.0553)***	(-2.6981)***	(5.8785)***	(-1.7212)*	(-1.0808)	(-3.1954)***	(-1.6687)*
MB	0.0022	0.0011	-0.0036	-0.0144	-0.0072	-0.0081	-0.0203
	(3.2213)***	(1.2341)	(-3.3829)***	(-4.6355)***	(-2.7175)***	(-7.2268)***	(-3.7405)***
ROA	-0.0462	-0.0121	0.0865	-0.8199	-0.2401	-0.4743	-1.0861
	(-2.0018)**	(-0.4102)	(2.3479)**	(-7.6685)***	(-2.7714)***	(-11.9822)***	(-5.9776)***
AUDIT	0.0029	0.0030	-0.0021	-0.0094	0.0083	-0.0029	-0.0026
	(1.1619)	(0.9426)	(-0.5152)	(-0.8458)	(0.9004)	(-0.6385)	(-0.1321)
LEV	-0.0211	-0.0274	0.0129	-0.0302	0.0379	-0.0502***	0.0061
	(-3.6016)***	(-3.7252)***	(1.3227)	(-1.0868)	(1.6302)	(-5.0449)***	(0.1255)
RD_INT	0.0504	0.0245	-0.0894	-0.7438	-1.6322	-0.1039	-2.3611
	(1.2512)	(0.4816)	(-1.4184)	(-3.9706)***	(-10.9334)***	(-1.5186)	(-7.4615)***
GOV	0.0002	0.0002	-0.0003	0.0015	0.0018	0.0002	0.0033
	(1.6045)	(1.1972)	(-1.2114)	(2.0708)**	(2.9250)***	(0.7226)	(2.6991)***
AGE	-0.0015	0.0018	0.0052	-0.0028	-0.0009	0.0065	-0.0037
	(-1.4909)	(1.4370)	(3.1901)***	(-0.5717)	(-0.2173)	(3.8866)***	(-0.4486)
ADMIRED	0.0016	0.0010	-0.0024	0.0191	0.0211	0.0072	0.0390
	(0.7610)	(0.3692)	(-0.7608)	(1.6932)*	(2.3924)**	(2.0982)**	(2.0798)**
INVESTOR	0.0014	-0.0003	-0.0029	0.0060	0.0046	-0.0012	0.0099
	(2.4452)**	(-0.3762)	(-3.5310)***	(2.3830)**	(2.1596)**	(-1.3106)	(2.2866)**
CREDITOR	-0.0007	0.0005	0.0020	-0.0063	-0.0055	-0.0005	-0.0119
	(-1.5538)	(0.7979)	(2.8539)***	(-3.3583)***	(-3.7882)***	(-0.6672)	(-3.8973)***
Intercept	0.0762	0.0552	-0.1039	0.2245***	0.1691	0.0665	0.4046
	(7.8197)***	(4.5528)***	(-6.4886)***	(4.9346)***	(4.3564)***	(3.7792)***	(5.1551)***
INDUSTRY dummies	included	included	included	included	included	included	included
YEAR dummy	included	included	included	included	included	included	included
Adjusted R^2	0.121	0.085	0.184	0.164	0.134	0.334	0.149
n	1,426	775	651	1,426	1,426	1,426	1,426
F-Statistic	10.96	4.662	8.907	14.810	13.40	35.980	14.040

The table reports coefficient estimates and *t*-statistics based on robust standard errors (in parentheses). ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed), respectively. Our main research interest is the association between CSP and our proxies for earnings management activities ABS_DA, POS_DA, NEG_DA, RM_PROD, RM_DISX, RM_CFO and COM_RM.

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